

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2002-030249

(43)Date of publication of application : 31.01.2002

(51)Int.Cl.

C09D183/04  
C09D183/08  
H01L 21/312

(21)Application number : 2000-214438

(71)Applicant : CATALYSTS & CHEM IND CO LTD

(22)Date of filing : 14.07.2000

(72)Inventor : EGAMI YOSHINORI  
NAKAJIMA AKIRA  
KOMATSU MICHIO

**(54) SILICA COATING LIQUID FOR FORMING LOW DIELECTRIC CONSTANT AND SILICA COAT SUBSTRATE WITH LOW DIELECTRIC CONSTANT**

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a silica coating liquid for forming low-dielectric constant with a dielectric constant as small as  $\leq 2.5$ , having low moisture absorbability and high mechanical strength.

SOLUTION: This coating liquid contains (A) at least one silicon compound selected from the group consisting of alkoxysilanes of the general formula (I):  $X_nSi(OR)^{4-n}$  and silane halides of the general formula (II):  $X_nSiX'^{4-n}$  and (B) an organic template material of the general formula (III):  $[R_1R_2R_3R_4N]^+Y^-$  (in these formulas, X is H, F, a 1-8C alkyl, fluorine-substituted alkyl, aryl or vinyl; R is H, a 1-8C alkyl, aryl or vinyl; X' is a halogen atom; n is an integer of 0-3; R<sub>1</sub> is a 1-20C hydrocarbon group; R<sub>2</sub> to R<sub>4</sub> are each H or a 1-20C hydrocarbon group and may be the same as R<sub>1</sub>; and Y is a halogen atom or OH).

## LEGAL STATUS

[Date of request for examination]

29.07.2004

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]